

IN THE SPECIFICATION

Please add the following paragraph on page 3, between lines 14-15 as follows:

The present system will be described in detail hereinafter, by way of example, with reference to drawings, wherein:

Fig. 1 shows an apparatus for carrying out the method in accordance with the present system, and

Fig. 2 shows magnetic field sub-areas produced by a coil provided in accordance with the present system.

A description of the present system will be provided with reference to Fig. 1 which shows an apparatus for carrying out the method in accordance with the present system, and Fig. 2 which shows magnetic field sub-areas produced by a coil provided in accordance with the present system. In FIG. 1, an arrangement 100 is shown for carrying out the method according to the present system. The arrangement includes at least one device 3a, 3b for generating a magnetic gradient field in at least one examination area of an examination object. The device 3a, 3b is operable to generate a magnetic field with a spatial profile of the magnetic

field strength such as shown in FIG. 2. As shown, there is produced in the examination area, a first sub-area 21 having a low magnetic field strength and a second sub-area 22 having a higher magnetic field strength. A device 8 is provided to change the spatial location of both sub-areas 21, 22 in the area of examination so that a magnetization of particles 6 changes locally. A high frequency generating device 9 is provided to generate a high frequency field to irradiate the area of examination such that the temperature of the magnetic particle spin system is increased. A coil 7 is provided to acquire signals that depend on the magnetization in the area of examination influenced by this change. An evaluation device 9 is coupled to the coil 7 for evaluating the signals to obtain information about the spatial distribution of the signals in the area of information.